



A.D. 1855 N° 498.

SPECIFICATION
OF
JOSEPH PLAYER
AND
LUKE DUNCAN JACKSON.

—
FURNACES.
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LONDON:

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1855.



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Furnaces.

(This Invention received Provisional Protection, but notice to proceed with the application for Letters Patent was not given within the time prescribed by the Act.)

PROVISIONAL SPECIFICATION left by Joseph Player and Luke Duncan Jackson, at the Office of the Commissioners of Patents, with their Petition, on the 6th March 1855.

We, JOSEPH PLAYER and LUKE DUNCAN JACKSON, of 2, Winchester Buildings, in the City of London, do hereby declare the nature of the said Invention for “**IMPROVEMENTS IN THE CONSTRUCTION OF FURNACES FOR THE PREVENTION OF SMOKE**” to be as follows :—

These improvements consist principally in the adaptation to furnaces of an additional or auxiliary set of fire bars in combination with a hopper for containing fuel, said hopper and fire bars being placed in front of the ordinary dead plate and fire bars of the furnace, and at the outside of the brickwork or setting thereof, said improvements being designed more particularly for furnaces in which turf, peat, or other similar description of fuel is employed, but may also be used in furnaces where coal is the fuel employed, and will be found in either case to economize the consumption of the fuel, and effect more perfectly than heretofore the consumption of the smoke. I would observe that I am aware of furnaces having already been constructed with two distinct and separate sets of fire bars, both placed within the setting or brickwork of the furnace, but at different heights or not on the same plane. These improvements do not, therefore, altogether consist in the adapting to furnaces of two sets of

Player & Jackson's Improvements in the Construction of Furnaces.

fire bars, unless such saidbars be arranged and disposed as before stated ; that is to say, by placing one set of bars with their dead plate and bearers within the furnace, as ordinarily practised, and the other or auxiliary set of bars at the outside of the said furnace, and connecting them to the brickwork in the following or any other convenient manner ; that is to say, I employ a kind of box or case formed of sheet or of cast iron with two sides lined with fire bricks or lumps. The front of said box or case, being also lined with fire bricks or lumps, constitutes a hinged door for affording access to the interior of the said box or case, the bottom whereof has an opening therein, in which are arranged a set of fire bars, and the other and solid part of the bottom which is next to the furnace is also lined with fire bricks. The top of this box or case serves as a hopper, in which the fuel to be employed is placed, and rests upon a sliding piece composed of fire bricks or lumps, the drawing out of which allows the fuel to fall on to the bars which are beneath. The box or case thus constructed is connected to the upright sides of the dead plate of the furnace by bolts and nuts, and when in use the fuel is first kindled in the aforesaid box or case, and is then pushed upon the inner set of bars and the dead plate ; fresh fuel is then allowed to fall into the box or case, and the smoke therefrom, passing over the clear fire in the furnace, will be more perfectly consumed than heretofore. The furnace bars derive their supply of fuel from the fire in the outer box, the operator opening the door thereof from time to time, and pushing the clear fire forward, and supplying the outer or auxiliary fire with fresh fuel as required.

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Printers to the Queen's most Excellent Majesty. 1855.